

# SeqNet.org: European Network for Sequence-based Typing

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www.SeqNet.org

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## SeqNet.org

SeqNet.org is an initiative of currently 65 laboratories from 29 countries in order to support a network of excellence for sequence based typing of microbial pathogens. The principle goal of SeqNet.org is to support unambiguous, electronic portable, easily comparable typing data of excellent quality for local infection control and national and European surveillance of sentinel micro-organisms. Here, we describe (i) the worldwide network for sequence based typing, (ii) distribution of the eight most successful *spa* types, (iii) distribution of *spa* types from PVL-positive MSSA and MRSA between 2004 and 2014 in Europe, (iv) NGSeqNet and (v) the NGS workshops.

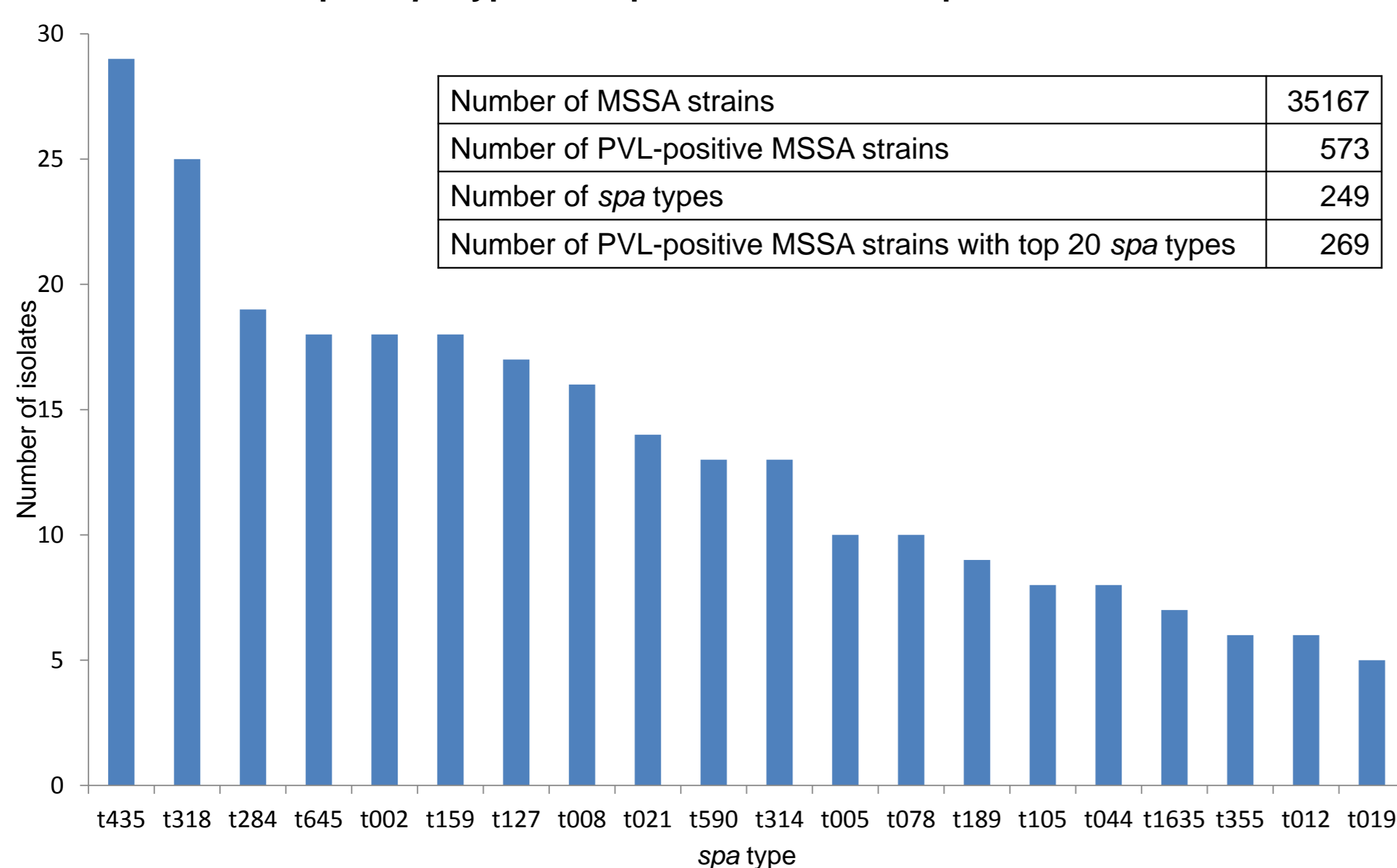
## Countries participating in SeqNet.org:

Austria | Belgium | Bulgaria | Canada | China | Croatia | Czech Republic | Denmark | Finland | France | Germany | Greece | Hungary | Iceland | Ireland | Israel | Italy | Japan | Latvia | Libanon | Luxembourg | Malta | Netherlands | Norway | Poland | Portugal | Romania | Scotland | Slovenia | Spain | Sweden | Switzerland | Turkey | United Kingdom

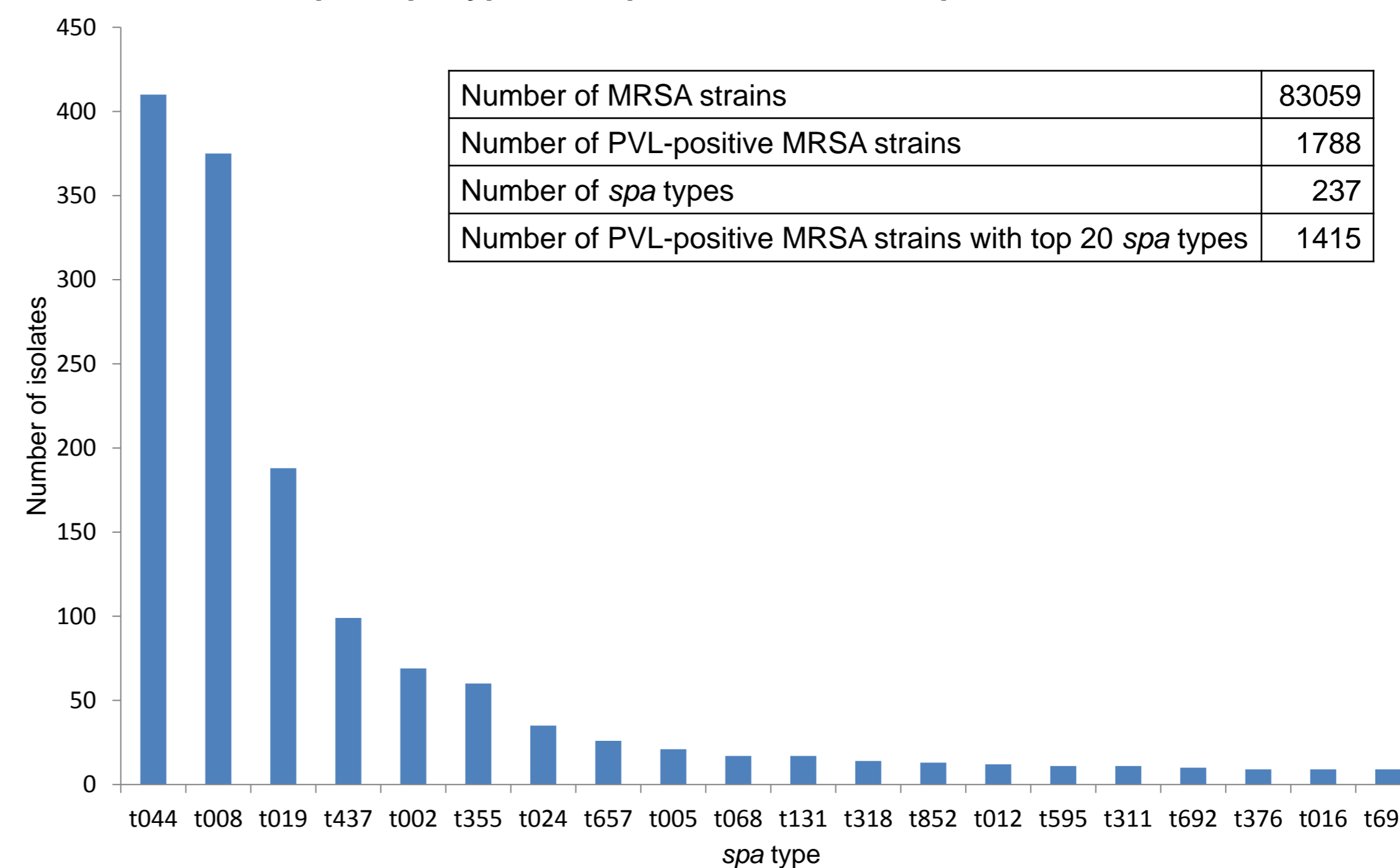
## Eight most frequently synchronised *spa* types on the Ridom SpaServer (www.spaserver.ridom.de)

<i>spa</i> -type	Frequency	Countries of origin	MLST
t032	10.44 %	Austria, Belgium, Canada, China, Czech Republic, Denmark, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Lebanon, Malaysia, Netherlands, New Zealand, Norway, South Africa, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States	ST-22
t003	9.12 %	Austria, Belgium, Canada, Croatia, Czech Republic, Denmark, France, Germany, Greece, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States	ST-5, ST-225
t002	6.79 %	Afghanistan, Argentina, Austria, Belgium, Canada, Chile, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Gabon, Germany, Hong Kong, Hungary, Iceland, Iran, Ireland, Israel, Italy, Japan, Jordan, Lebanon, Macedonia, Martinique, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, South Africa, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates, United Kingdom, United States	ST-5, ST-231
t008	6.27 %	Argentina, Australia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Gabon, Germany, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Jordan, Lebanon, Netherlands, New Zealand, Nigeria, Norway, Poland, Portugal, Romania, Slovakia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates, United Kingdom, United States	ST-8, ST-247, ST-250, ST-254
t011	3.24 %	Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Iceland, Ireland, Israel, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland	ST-398
t127	2.21 %	Argentina, Austria, Belgium, Brazil, Canada, China, Croatia, Cyprus, Denmark, Finland, France, Gabon, Germany, Greece, Iceland, Indonesia, Ireland, Israel, Italy, Ivory Coast, Latvia, Lebanon, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Poland, Romania, South Africa, Spain, Sweden, Switzerland, Taiwan, Uganda, United Arab Emirates, United Kingdom, United States	ST-1
t084	1.81 %	Argentina, Australia, Austria, Belgium, China, Denmark, Finland, France, Gabon, Germany, Iceland, Indonesia, Italy, Jordan, Lebanon, Netherlands, New Zealand, Nigeria, Norway, Poland, South Africa, Spain, Sweden, Switzerland, Taiwan, Uganda, United Arab Emirates, United Kingdom, United States	ST-15, ST-18
t012	1.66 %	Argentina, Austria, Belgium, Canada, Chile, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Jordan, Kosovo, Latvia, Lebanon, Netherlands, New Zealand, Norway, Poland, Romania, Senegal, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States	ST-30

## Top 20 *spa* types PVL-positive MSSA Europe 2004 - 2014



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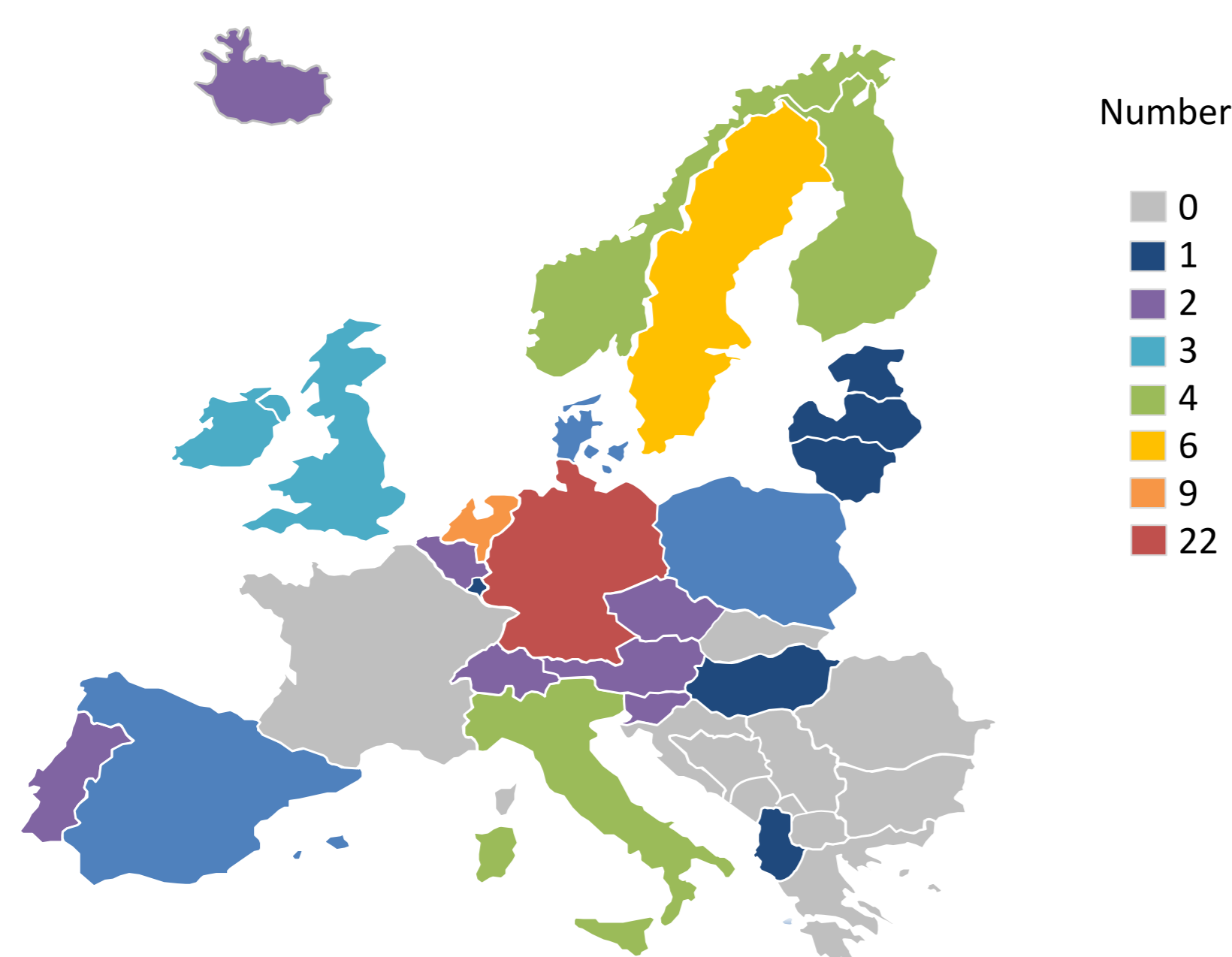
## SeqNet goes Next Gen

In 2014, the first capacity-building workshops on Next Generation Sequencing (NGS) were organized. NGSeqNet (Next Generation SeqNet) consists of the SeqNet-laboratories that want to implement next to conventional sequence-based typing, NGS-based typing methods. In this network, a common language will be spoken by professionals in human and animal public healthcare as well as professionals in the food industry and environmental institutions, making surveillance and tracking of common pathogens a much easier task (*One Health* initiative).

For training and knowledge-transfer, two capacity-building workshops on NGS for next generation pathogen surveillance will be organized in 2015; one in March in Munster (Germany) and one in October in Groningen (The Netherlands). These workshops will have a duration of three days, in which the first day will be a practical course on NGS, while on the second day, leading scientists in the field will give presentations while on the third day, various software packages for data analyses will be presented. The workshop in October will be organized in collaboration with ESGEM, ESGMD and EurSafety Health-net.

The trained technicians, bioinformaticians and molecular biologists will transfer their knowledge to other colleagues in the geographic region (train the trainer). Furthermore, the trained technicians, bioinformaticians and molecular biologists are encouraged to organize their own NGSSeqNet-workshops in their country/region.

## NGSeqNet capacity-building workshop participants by country, 2014-2015



## ANNOUNCEMENT

### ESCMID Postgraduate Technical Workshop

#### Capacity-building Workshop: Rapid NGS for Characterization and Typing of Resistant Gram-Negative Bacilli

October 7<sup>th</sup> – 9<sup>th</sup>, 2015, UMCG Groningen, The Netherlands



ESGMD  
ESCMID STUDY GROUP FOR MOLECULAR DIAGNOSTICS  
European Society of Clinical Microbiology and Infectious Diseases

ESGEM  
ESCMID STUDY GROUP FOR EPIDEMIOLOGICAL MARKERS  
European Society of Clinical Microbiology and Infectious Diseases

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